

An Applied Study on Brand Equity: Factors Affecting Brand Equity Case Study of Mtn Telecom Cameroon

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Abstract

Despite of economic downturn in recent years, the Telecommunication industry has performed well in Cameroon and has grown by 4.1% in 2014³. Now, Telecom players in Cameroon like Mtn, Orange, Yoome, Creolink, Camtel, Equacomm, Foris Cameroon, Vodacom, Ringo, are in a battle of differentiating their products/services and offers, as the degree of competition are moderately high in the market. Hence, building a strong brand image has apparently become a foremost competitive tactics in industry. This study help to apprehend the factors affecting telecom sector which is increasingly growing in Africa and enables telecommunication operators to understand market, consumers and to control strategies of differentiation toward competitors. The study presents the findings of empirical research sampling consumers of mobile communication brands. We proposed a brand equity model with four dimensions (brand awareness, perceived quality, brand trust and brand loyalty) and the relationship among those four dimensions and their effects on brand equity is empirically investigated. The model is tested by structural equations and the sample of 215 students was selected from Cameroon. Data was gathered by the 22-items questionnaire in self-reporting and online way. The finding shows that relations among brand awareness, perceived quality, brand trust and brand loyalty on brand equity are significant and positive effect. Brand awareness has a positive effect on perceived quality; Perceived quality, brand trust and brand loyalty will mediate the effect between brand awareness and brand equity.

Keyword: Brand, Brand Equity, Factors affecting brand equity, MTN Telecom Cameroon.

INTRODUCTION

Brand equity is likely one of the most important marketing concepts in both business practice and academic research (Atilgan, E., S. Aksoy and S. Akinci, 2007). This is because successful brands can allow companies to have competitive advantage (Lassar et al, 1995). Literatures divide brand equity into three categories: customer-based perspective (Aaker, 1991), financial perspective (Simon and Sullivan, 1993), and combination of both perspective (Anderson, 2007).

Previous researchers have established the interaction effect of some variables on brand equity and its consequences (e.g. Buil, de Chernatony, & Martinez, 2013; Huang & Sarigöllü, 2012). However, only few studies have examined the strength of the influence of brand awareness, perceived quality, brand trust and brand loyalty on perceived brand equity in different Telecom consumption situations (Lee, J.s and K.J. Black, 2009). Strong brand with positive brand equity has several benefits like larger margins, great loyalty, purchase intention, consumer preference, market share consumer, perceived quality, marketing communication effectiveness, good brand extensions evaluations, consumer price insensitivity (Dawar and Pillutla, 2000) and so on⁴. Therefore, this study intends to contribute to the existing body of knowledge by examining the effect of four variables on brand equity perceived by consumers.

This study aims to formulate and test a model in order to contribute on finding out the concrete factors that impact brand equity management in the Telecom Industry by illustrating on a real empirical case of MTN Telecom Cameroon. At first, the present study commences with a review of literature, proportionate with theoretical framework. Next, we will describe research methodology and data-analysis results are put forward. Finally, conclusions, limitations and suggestions for further research are presented.

³ BuddeComm based on various sources

⁴ (Cobb-Walgren et al, 1995); (Agarwal and Rao, 1996); (Dodds et al, 1991); (Keller, 1993); (Aaker, 1991).

1. LITERATURE REVIEW

1.1 Brand equity

The brand equity (Kim et al.2006) can be defined as the set of attitudes and behaviors of consumers associated with a brand. That is to say, brand equity refers to the value provided by a brand to products and services that it covers. It is all assets and liabilities elements which is related to a brand, to its name or its symbol (logo, packaging ...), etc. They give a positive or negative value to products and services. This value depends on the thoughts, feelings and actions of customers about the brand and also its price, its market share and profitability.

Companies can create brand equity for their products by making them memorable, easily recognizable, superior in quality and reliability (Yoo et al 2000, Aaker, 1991). For instance, the additional money that consumers are willing to spend to buy an iPhone APPLE, rather than the store brand of phones is an example of brand equity.

According to Keller (2002), if consumers are willing to pay more for a generic product than for a branded one, the brand is said to have negative brand equity. This might happen if a company had a major product recall or caused a widely publicized environmental disaster.

When the brand value is positive, it reinforces the brand image, secures the territory of business on the market. For David A. Aaker (1991) the brand equity consists in five main categories:

- Customer loyalty to the brand;
- Brand awareness;
- Perceived quality;
- The image of the brand, that is to say all the connotations associated with the Brand in addition to the perception of the quality of products or services;
- Any other assets related to the brand: brand trust, patents, trademarks, quality of relationships with distributors,etc.



Figure 1: Brand Equity Assets

1.2 Brand Awareness

The brand awareness can be defined as the level of knowledge that an individual has from a company or from a relevant brand (Aaker, 1996). This notion is essential because it is especially due to the knowledge of his name that a customer requests a particular brand. Several awareness levels have been identified (Laurent Kapferer and Roussel, 1995):

The aided brand awareness, mean a recognized brand, that is to say, the interviewees are not able to quote directly a brand name but when brand names are presented to them, they can easily describe products categories concerned.

Spontaneous awareness (unaided), in that case, the brand is known: consumers are asked about a product range, without any prompting, they name among other competing brands a particular brand.

Top of mind awareness (unaided senior), using the same question, the percentage of interviewees who name the brand first is considered. That is, it's reached when the brand is so present in the buyer mind he will think

first at that brand for a category of products or services.

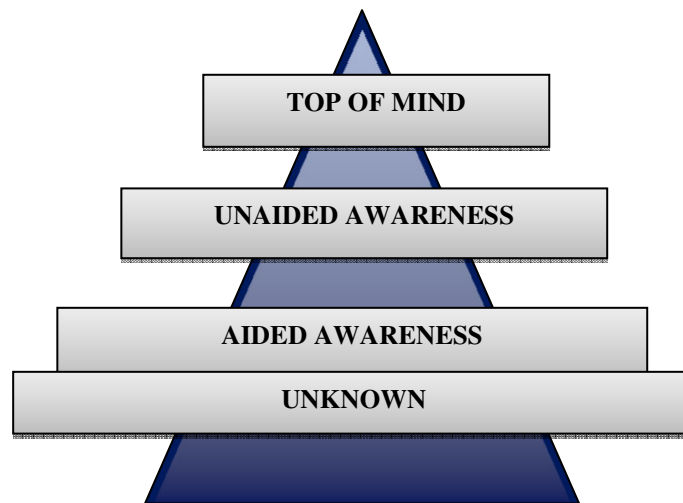


Figure 2: Brand awareness pyramid

While awareness measures the level of knowledge of a brand, attention can measure existence and importance of brand information stored on a memory. The attention can be break down into two dimensions which are recall and recognition. The first (brand recall) is evaluated by the unaided awareness and in particular by measuring the brand name first (top of mind), while the second (brand recognition) is by the aided awareness. In general, the ability to remember spontaneously brands (brand name recall) is considerably less than the ability to recognize brands (brand recognition) (Percy & Rossiter, 1992).

These two measurements are obtained by asking customers about brands they know in a products range. The importance to acquire brand awareness is multiple for companies while allowing them to develop consumer preference for their products (Dodds et al., 1991, Grewal et al., 1998).

However, a strong reputation with the public is not a sufficient element to enhance the brand. Brand recall and brand image has to be favorable and the perceived product quality has to be better than that its competitors. Brand awareness has a number of distinct effects in consumers' perception of different brands, and working to build brand awareness is crucial for small business success (Keller, 1993, Macdonald & Sharp, 2000).

Based on the assumed hierarchy of effects between brand equity dimensions, the research hypothesis is proposed as below:

Hypothesis 1 (H1): brand awareness has a significantly positive effect on perceived quality.

1.3 Perceived quality

Perceived quality is defined as the consumer's perception of the level of quality of a product resulting from a subjective judgment on a product (Zeithaml, 1988; Dodds et al., 1991; Aaker, 1991). Aaker, (1991) Perceived quality generally refers to the quality perceived by the consumer before purchasing and using a product or service. In this case, perceived quality is the result of many factors: Image of the product or service, Design, Materials and component, Prices, Reputation, etc.

Consumers have a tendency to expect highly advertised brands to offer higher quality products than generic products or brands they have not seen before (Ramos and Franco, 2005). In grocery stores, for instance, consumers are often presented with a mix of options for individual products, ranging from highly advertised and recognizable brands to generic products. Aaker (1991), in a grocery store buyers are likely to view the higher-priced "name brands" as superior to store brands, even if both brands contain the same ingredients or are manufactured in the same factory.

Perceived quality is a judgment that has the consumer about a product / service, with respect to his expectations. This judgment can be worn without direct experience with the product / service (Olshavsky, 1985; Zeithaml, 1988).

According to the bellow schema (**Fig.3**), perceived quality is the result of a comparison between

consumer expectations and perceived performance of product / service (Zeithaml, 1988; Dodds et al., 1991): when the perceived performance exceeds expectations, the consumer believes that the product/service is good (normally he is satisfied). When the perceived performance is below expectations, the consumer believes that the product/service is not good (normally he is not satisfied). (Aaker, 1991).

(Aaker, 1996; Wan, 2006) The quality judgment led to evaluate the superiority or inferiority of the product / service compared to its competitors. Perceived quality is a comparison between the performance of the product / service and consumer expectations. Sometimes the consumer has no expectations. But in the general case, expectations exist, including before the first experience (e.g., knowledge of the executive and actors of a new movie determines a certain level of expectation).

The attitude toward the product/service is "update" after every new experience. This involves several steps: the consumer has a pre-existing attitude towards the product/service; after experiencing the product/service (use, consumption, etc.); he then compares the performance of the product/service expectations (Holbrook & Corfman, 1985). From that comparison comes the perceived quality's judgment, and the degree of satisfaction's assessing. Finally, this assessment will change the existing consumer attitude. That is why perceived quality can play a big role in the process of choosing and buying (Morgan, 1985; Aaker, 1996). Based on these the following hypothesis is proposed:

Hypothesis 2 (H2): perceived quality has a significantly positive effect on brand trust.

Hypothesis 3 (H3): perceived quality has a significantly positive effect on brand loyalty.

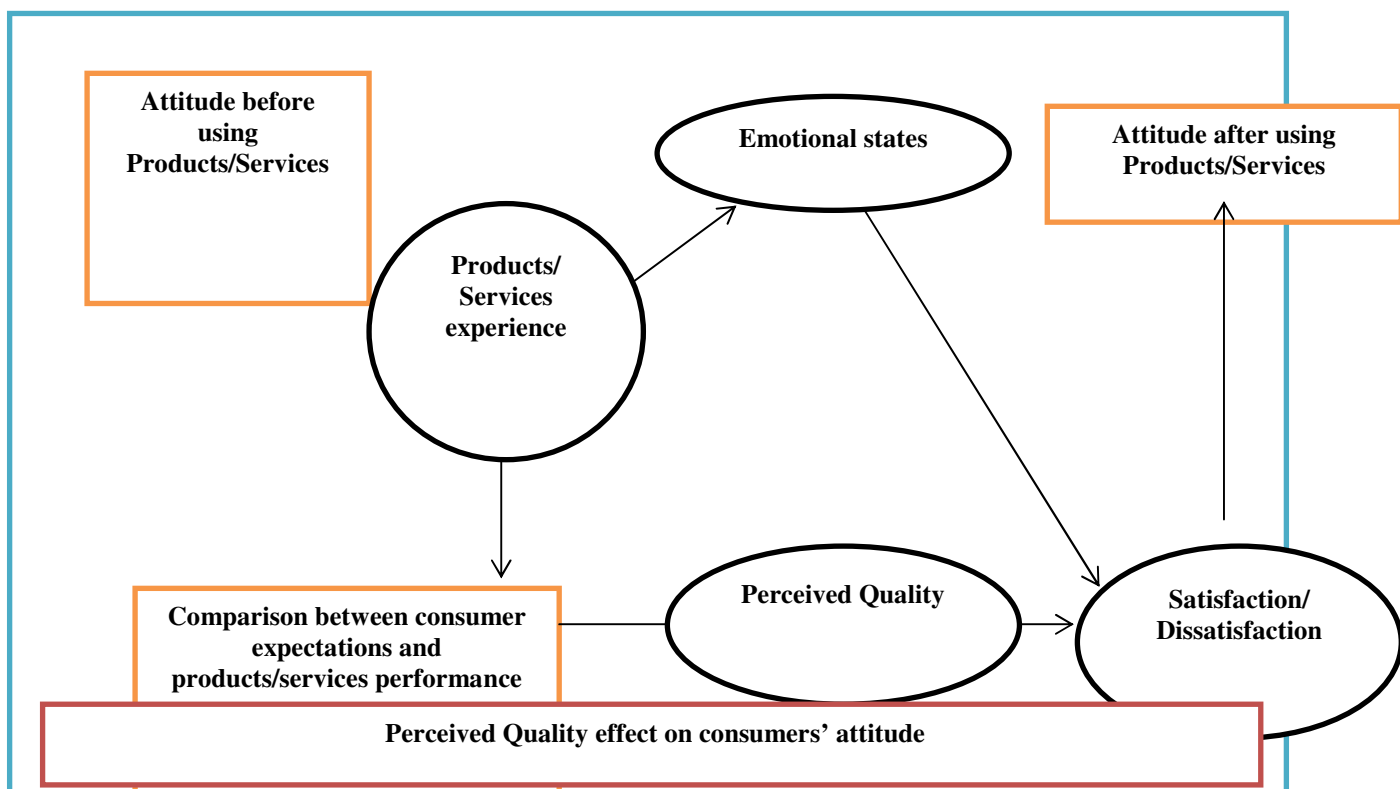


Figure 3: Perceived Quality Attitude

1.4 Brand Trust

1.4.1 Definition

Trust is a vital component of human relationships, whether it is trust in our friendships, our financial advice, our business partners, or even the contents of our food. Several studies have been conducted to find out a definition of brand trust. According to Gurviez (1998), trust is: "the expectation by consumers that a brand is committed to have a predictable action and in line with consumer's expectations, and to maintain this orientation in a long

term." Frisou (2000) sees trust as: "The set of beliefs ensuring the customer that intentions and behaviors of its exchange partner will produce the expected results."

Trust is presented as a variable, required for stable and lasting relationship and whose consequences are reflected in a commitment to the brand (Gurviez 1998; Gurviev and Korchia, 2002). According to Gurviev (1998) and Frisou (2000), trust is a three-dimensional concept: - **Credibility** (predictable action and in line with expectations), - **integrity** (commitment to the relationship with the brand) - **goodwill** (orientation in time).

"You can have all the facts and figures, all the supporting evidence, all the endorsement that you want, but if at the end of the day you don't command trust, you won't get anywhere." Niall Fitz Gerald (2001)

This is why trust is an incredibly important factor when it comes to business relations, specifically, customers' brand trust (Lasser et al, 1995). Customers want to be able to rely on brand and companies want to seem trustworthy so that, it will encourage customers to buy their product, remain loyal to their brand, and share their excitement over their brand with others. The following are some interesting drivers of Trust:

- 83% of respondents are willing to recommend the brand they trust further,
- 82% of respondents would buy again and again from brands they trust (and thus become regular customers).
- 78% prefer to buy products from brands that they trust,
- 78% are willing to new products or services from brands that they trust. Thus, it is easier to implement innovations and the risk of a new product failing is lowered,
- 50% would pay more for products or services that they trust.

1.4.2 Brand Trust related to Brand Loyalty and Brand Equity

Brand trust progress from past experience and previous interaction (Garbarino and Johnson, 1999) because its development is describe most often as an individual's experiential process of learning over time. It is influenced by the consumer's evaluation of any direct and indirect contact with the brand (example: trial, usage, advertising, word of mouth, etc.) (Keller, 1993; Krishnan, 1996). Therefore it summarizes the consumers' knowledge and experiences with the brand.

The consumption experience is one of the most pertinent and important source of brand trust, because it produces associations, thoughts and deductions that are more self-relevant and held with more certitude (Dwyer et al., 1987; Krishnan, 1996). Thereby, one relevant quality that every company need to develop as part of their brand strategy is consumer trust in their brand promise. That is to say, consumers need to trust that a brand will fulfil its promise in every interaction, or they will turn away from that brand for another one that meet their expectations and delivers on its promise over and over again.

Considering brand equity as a relational market-based asset mean that building and maintaining trust is at the core of brand equity, because it is a key characteristic of any successful long-term relationship (Garbarino and Johnson, 1999; Larzelere and Huston, 1980; Morgan and Hunt, 1994). MacLeod (2000) considers that much of the vocabulary of modern brand building uses words associated with personal relationships such as trust and Blackston (1992) views trust to be one component of consumers' relationships with brands.

In this context, brand loyalty does not exclusively focus on repeated purchases, but on the internal attitude towards the brand, the focus on behavior would otherwise not provide an adequate basis for a complete understanding of the brand-consumer relationship. Thus, brand loyalty underlies the ongoing process of continuing and maintaining a precious and important relationship that has been created by trust (Chaudhuri and Holbrook, 2001).

Another argument in support of this thought is that the unique value perceived in a brand by consumers may be derived from greater trust in that particular brand that other brands do not provide (Chaudhuri and Holbrook, 2001).

Consequently, when a customer find a brand that they trust in and who will meet their expectations every time they purchase and use it; they will probably be loyal to that brand and choose it over others (Kim and Kim, et al, 2001). They might even be extremely loyal to that brand and recommend the brand to their friends and family

members. They might even talk about that brand regardless of whether someone asks about it or not. For example, most of the loyal Apple customers talk about how great their iPhone or iPad is whether or not someone asked his opinion. That's an example of brand loyalty, trust that the iPhone or iPad will meet his expectations and that the overall Apple brand will deliver on its brand promise in every interaction they have with it.

From a managerial perspective, companies have also begun to consider the idea of winning consumers' trust in order to build a relationship. In the consumer market, there are too many anonymous consumers, making it unlikely that the company could develop personal relationships with each one. Therefore, consumers develop a relationship with the brand, which becomes a substitute for human contact between the organization and its customers (Sheth and Parvatiyar, 1995). Trust, thereby, can be developed through this relationship with the brand. For example, Sheth and Parvatiyar (1995) contend that the logic behind the existence of the brand is to transmit trust to the market, especially when direct contact between consumers and companies are not possible.

More recently, Hiscock (2001, p. 1) has contend that "the ultimate goal of marketing is to generate an intense bond between the consumer and the brand, and the main ingredient of this bond is trust". Building brand trust is an important foundation of increasing brand value; make it the number one priority as brand trust also leads to brand loyalty and a decrease in customer turnover. Based on these ideas, we put forward the hypothesis that brand trust will contribute to brand loyalty as the maximum expression of a successful relationship between the consumer and the brand.

Hypothesis 4 (H4): Brand trust has a significantly positive effect on brand loyalty.

Hypothesis 5 (H5): Brand loyalty has a significantly positive effect on brand equity.

1.5 Brand Loyalty

Brand loyalty is widely discussed in marketing literature because it has a more and more important role in the marketing. Researchers have been challenged to define and measure brand loyalty because this dimension is formed by two different components: attitudinal and behavioral (Dick and Basu, 1994). So, Loyalty can be defined as a consumer relationship to an object (a brand, a sign, etc. ...) and reflects both repetitive behavior and a positive attitude towards the subject matter. (Aaker, 1991) Brand loyalty consists of becoming committed to a brand and faithfully repeat purchases over time. Brand loyalty is a result of consumer behavior and is affected by a person's preferences. (Deighton, Henderson & Nesli, Aaker, 1991).

Contrary to the simple repeat purchase, brand loyalty implies a psychological commitment to the brand. Thus, the simple act of regularly buy a particular brand is not evidence of brand loyalty, moreover, it is possible that one regularly buys a product because it is always on sale or because it is the only brand selling in the shop frequented by that consumer (Oliver, 1997). Brand loyalty has several important strategic benefits to firms, such as gaining high market share and new customers, supporting brand extensions, reducing marketing costs, and strengthening brand to the competitive threats (Atilgan et al, 2005) and even more a loyal customer base represents a bulwark against deleterious price competition and are a barrier to entry because loyal customers will consistently purchase products from their preferred brands, regardless of convenience or price. Therefore, companies will often use different marketing strategies to cultivate loyal customers, being through loyalty programs or trials and incentives like rewards programs, samples, free gifts etc.

In a context where technology is quickly changing and where consumers are looking above all the best price / quality ratio value, loyalty habits are changing. Thus, if brands want to keep their consumers for long time, they must learn to listen to them and to know them, in order to develop with them bilateral exchanges, personalized, continuous and monitored over time (Zaltman and Hunt, 1994, Mohammad 2012, Chaudhuri & Holbrook, 2001). Brand loyalty is at the heart of brand equity (Tong and Hawley, 2009) and according to Aaker (1996) brand loyalty is a core dimension of brand equity. One characteristic of brands with high levels of equity is that consumers are very loyal to them. In fact, brand loyalty was found to have a dominant effect on brand equity because it is considered to be the path that leads to certain marketing advantages and outcomes (for example, reduced marketing costs, price premiums, market share, greater trade leverage), which have been closely associated with brand equity (Aaker, 1991; Bello and Holbrook, 1995; Park and Srinivasan, 1994). Therefore, brand loyalty should be improved for increasing brand equity (Mishra and Datta, 2011). We propose another hypothesis describing the relationship between brand loyalty and brand equity:

Hypothesis 6 (H6): Brand loyalty has a significantly positive effect on brand equity.

2. METHODOLOGY

2.1 Research Design

According to the above literature reviews, a research framework (in Figure 4) was elaborated and an empirical study was designed to test the above hypothesized relationships, for that goal, the mobile communication market in Cameroon (MTN Telecom) was targeted; the target population of interest was defined as the students of a local university and high school. This study focused mainly on brand awareness, trust, loyalty, perceived quality and brand equity.

- Brand awareness is the independent variable,
- Brand equity is the dependent variable;
- Perceived quality, brand trust and brand loyalty, are the mediating variables.

So, focusing on the appropriate measurement of these constructs is the priority on this research.

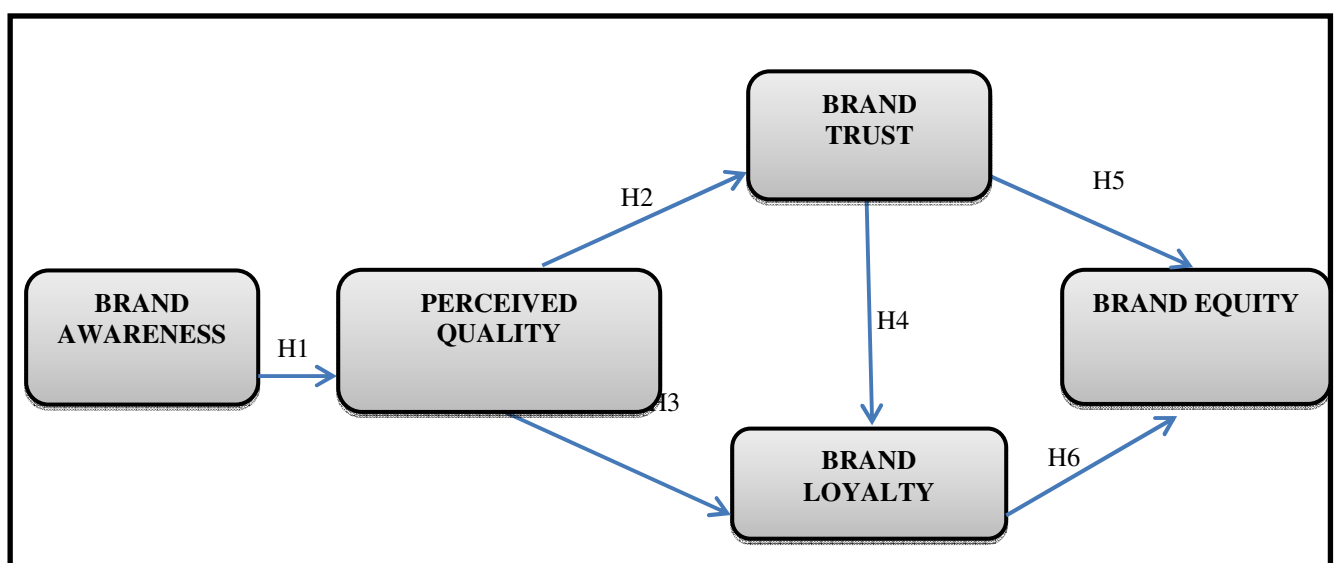


Figure 4: Research Hypotheses

The research hypotheses are proposed as follows:

Hypothesis 1 (H1): Brand Awareness has a significantly positive effect on Perceived Quality.

Hypothesis 2 (H2): Perceived Quality has a significantly positive effect on brand trust.

Hypothesis 3 (H3): Perceived Quality has a significantly positive effect on brand loyalty.

Hypothesis 4 (H4): Brand trust has a significantly positive effect on brand loyalty.

Hypothesis 5 (H5): Brand Trust has a significantly positive effect on brand equity.

Hypothesis 6 (H6): Brand loyalty has a significantly positive effect on brand equity.

2.2 About the case study Company: MTN Telecom Cameroon

Launched in 1994, MTN Group is a multinational telecommunications provider, with core operations in 21 Africa and the Middle East and with over 150 Million subscribers. Established in 2000, MTN Cameroon is one of the biggest operators with more than 50% market share in Cameroon. MTN Telecom' Slogan is "Everywhere you go" and their Parent company is MTN Group. In Cameroon Headquartered is located at Douala-Cameroon, and their website is mtncameroon.net.



Figure 5: MTN Telecom Cameroon Logo

2.3 Sample Definition and Questionnaire Characteristic

An online and self-administered (face-to-face) questionnaire was elaborates and administrates to be answered by consumers in order to test the hypotheses previously developed. The investigated population was randomly drawn from the population of consumers, mostly university and high school students, who reside within the capital city area, name Yaoundé in Cameroon because they are one of the most important customers of mobile telecommunication.

An extensive literature was carry out to identify the effects of brand awareness to build long-running brand and customer relationship with perceived quality, brand trust, brand loyalty and brand equity. Then, questionnaires were developed by using measurement scales adopted from prior studies.

Once designed, in order to verify and enhance the clarity of the questionnaire' sentences a pre-test stage was conducting with a sample of 20 students. Their opinions and suggestions were taking into consideration and introduced in the final questionnaire (Walsh & Beatty, 2007).

A questionnaire comprising 22 questions was designed. Out of 44 questions, 18 questions were designed for measuring the variables and 4 questions for measuring demographic features of the sample. Each respondent was invited to answer the questions according to a Likert scale from one (strongly disagree=1) to five (strongly agree=5). We choose five point Likert scale because it is very useful when we would like to measure the "intensity" of an opinion. Also, its look less time consuming to answer (compare to seven points or ten points Likert scale) and help respondents to better understand what option he or she should choose for his or her answer.

2.4 Data Gathering

The research data was collected through the questionnaire. That questionnaire began with an introductory statement that asked respondents to fulfill as per their honest opinion, assured them of confidentiality, and so forth. This was followed by a request for demographic information and the measures. We formed our sampling frame by a randomly selected of 236 students and the five points Likert scale was used. Out of 236 distributed questionnaires (including 80 online participants) only, 215 questionnaires were comprehensive and able to be use; nevertheless, 21 questionnaires, having default answers, were eradicated. As we said before, the questionnaire was filled in on both ways, online and through direct recourse and in a self-report manner.

2.5 Measures

Questions in the questionnaire are based on a review of the literatures and researches. That questionnaire was designed as a survey instrument to investigate the hypotheses. The survey questionnaire consists of six sections. The first section is designed to obtain sample characterization. The second section is elaborated to measure the brand awareness and, items used for measuring were adapted from (Yoo et al, 2000) and (Loureiro and Miranda, 2011). The modified brand awareness scale consists of three items using five Point Likert-type scales (as we said before). The third section is about perceived quality measurement with items adapted from (Nam et al, 2011) and (Yoo et al, 2000). The modified perceived quality scale consists of six items (using a five point Likert-type scale). The forth section is designed for measuring brand loyalty. Items were adapted from previous studies: Yoo

et al, 2000, Yoo and Danthu 2001; Grace and O'Cass 2005; Algesheimer, Uptal and Herrmann 2005; Fullerton 2005; Heithman, Lehman, and Herrmann, 2007; Hess and Story, 2005; Johnson, Herrmann and Huber, 2006; Sierra and McQuity, 2005. The modified brand loyalty scale consists of three items using a five-point Likert-type scale. The fifth section is designed to measuring brand trust and items used for measuring were adapted from Li et al, 2008; Hsteh and Hiang 2004; Caceres and Paparoidamis 2007; Ballester and Aleman-Munuera 2001; Dixon, Bridson, Evans and Morrison 2005; Chaudhuri and Holbrook 2001. The modified brand loyalty scale consists of three items using a five-point Likert-type scale. Finally, the sixth section deals with brand equity with three items using a five-point Likert-type scale. Items used for measuring were adapted from Yoo et al, 2000.

Construct		Items	Sources
Brand Awareness	BA1	I can recognize MTN among other competing communication brands.	Yoo et al, 2000; Loureiro and Miranda, 2011.
	BA2	I can quickly recall the symbol or logo of MTN.	
	BA3	MTN comes up first in my mind when I need to make a purchase decision on phone recharge card or any telecommunication products.	
Perceived Quality	PQ1	Reliability: When the company promises to do something by a certain time, it does so.	Nam et al, 2011; Yoo et al, 2000).
	PQ2	Responsiveness: The company quickly resolves problems I encounter.	
	PQ3	Competence: Employees have the knowledge to answer my questions.	
	PQ4	Ease of use: It is easy for me to complete a transaction through MTN Web site and find information that I need from their platform.	
	PQ5	Product portfolio: The company provides most of the service functions that I need.	
	PQ6	Overall service quality: Overall, the quality of service provide by MTN is excellent.	
Brand Loyalty	BL1	MTN is my first choice; I will not buy other telecommunication brands, when MTN is available at the store.	Yoo et al, 2000; Yoo and Danthu 2001; Grace and O'Cass 2005; Algesheimer, Uptal and Herrmann 2005; Fullerton 2005; Etc.
	BL2	I consider myself to be loyal to MTN	
	BL3	I will definitely buy MTN products and services although its price is higher than the other brand(s) of products and services that offer similar benefits.	
Brand Trust	BT1	My overall trust in MTN products (goods and services) is high.	Li et al, 2008; Hsteh and Hiang 2004; Caceres and Paparoidamis 2007; Ballester and Aleman-Munuera 2001; Etc.
	BT2	I consider MTN Company and people who stand behind MTN to be trustworthy.	
	BT3	I believe that MTN does not take advantage of consumers; when they make important decision, they consider consumers' interests: MTN is very reliable.	
Brand Equity	BE1	I am proud of use MTN services and products	Yoo et al, 2000;
	BE2	If there is another brand as good as MTN, I prefer to buy MTN services and products.	
	BE3	I will definitely choose MTN even if the other competitor has the same price with MTN	

Table 2: The Questionnaire's construct items and sources

2.6 Sample Characterization

The online questionnaire and self-report way questionnaire, were accessible and administer from 02 August to 25 October of 2015. According to the method of Walsh & Beatty, 2007, some university and high school students (from few universities and high school in Cameroon, through friends) were instructed to ask at least 03 other peoples to fill in the survey. Some of these 03 people had to be non-students and represent a certain range of ages and genders. The data collection process lasted around eleven weeks with a total of 215 responses.

Statistical description of those 215 answerers is as the following: 48.4 percent males and 51.6 percent females. In term of age, most respondents fell into the 20-30 age groups, 35 people were below 20, 64 people between 31-40, and 41 people above 40. In terms of education level, there were 35 people having diploma, 26 people below diploma, 42 people Bachelor, 45 having Master Degree and 67 people having Phd. In terms of monthly income, most of respondents receive on average between Fcfa 100 000-300 000 (Rmb 1000-3000) and 81 respondents earn more than Fcfa 500 000 (Rmb 5000).

VARIABLES		Frequency (Number of People)	Ratio (%)	TOTAL
GENDER	Male	104	48.4	215
	Female	111	51.6	
AGE	Less than 20 years	35	16.3	215
	20-30 years	75	34.9	
	31-40 years	64	29.8	
	Above 40 years	41	19.1	
MONTHLY INCOME	Less than Fcfa 100 000 (Rmb 1000)	39	18.1	215
	Fcfa 100 000-300 000 (Rmb 1000-3000)	58	27.0	
	Fcfa 300 001-500 000 (Rmb 3001-5000)	37	17.2	
	More than Fcfa 500 000 (Rmb 5000)	81	37.7	
EDUCATION	Secondary School	26	12.1	215
	Certificate / Diploma	35	16.3	
	Bachelor Degrée	42	19.5	
	Master Degree	45	20.9	
	Phd	67	31.2	

Table 3: Description of the Respondents

3. DATA ANALYSIS AND RESULTS

3.1 Reliability analysis and Factor analysis

3.1.1 Reliability analysis

This section aims to evaluate the measurements scales used in the research and then we will use the regression analysis to proceed an estimation of the structural model. The study applied Cronbach's alpha statistic to measure the internal reliability of the questionnaire by using SPSS. In fact, according to Guiford (1965), Cronbach's alpha is considered to be a measure of scale reliability. So, its help to evaluate how closely related a set of items are as a group by measuring the consistence of each item under the same construct. A commonly accepted rule of thumb for describing internal consistency is as follows:

Cronbach's alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent Reliability
$0.8 \leq \alpha < 0.9$	Good Reliability
$0.7 \leq \alpha < 0.8$	Acceptable Reliability
$0.6 \leq \alpha < 0.7$	Questionable Reliability
$0.5 \leq \alpha < 0.6$	Poor Reliability
$\alpha \leq 0.5$	Unacceptable Reliability

Table 4: Internal Consistency Rate

Table 4, reveals the composed reliability of independent and dependent variables. We can observe that all constructs have a Cronbach's α greater than the suggested value of 0.6 (recommended by Guiford, 1965). Cronbach's α of brand awareness is 0.860. Perceived quality is 0.889; brand trust, brand loyalty and brand equity are 0.960, 0.896 and 0.895 respectively. The results of the study show that Cronbach's α in all variables is higher than 0.7. It indicates that the reliability of the questionnaire is Good.

Construct	Number of Item	Reliability (Cronbach's α)
Brand Awareness	03	0.860
Perceived Quality	06	0.889
Brand Trust	03	0.960
Brand Loyalty	03	0.896
Brand Equity	03	0.895

Table 5: Construct reliability Cronbach's α

3.1.2 Factor analysis

Factor analysis is a statistical technique used during a survey in order to detect similarities between variables and, allowing comparisons and contrasts between the characteristics of individuals. To concentrate the effect of variables in research dimensions and to confirm hypotheses, every research variables are operated with factor analysis.

Our scales were submitted to exploratory factor analysis separately. Data was obtained by dint of principal component analysis with a Varimax rotation. Principal components analysis helps to identify inter-relationships between variables. The rotated component matrix, sometimes referred to as the loadings, is the key output of principal components analysis. It contains estimates of the correlations between each of the variables and the estimated components.

	Component				
	1	2	3	4	5
PQ1	.808				
PQ2	.764				
PQ3	.628				
PQ4	.716				
PQ5	.782				
PQ6	.816				
BT1		.853			
BT2		.861			
BT3		.877			
BL1			.862		
BL2			.836		
BL3			.893		
BA1				.821	
BA2				.783	
BA3				.812	
BE1					.609
BE2					.923
BE3					.921

Extraction Method: Principal Component Analysis. / Rotation converged in 6 iterations. / Rotation Method: Varimax with Kaiser Normalization. /

Table 5: Rotated Component Matrix

According to Table 5, there are moderate-to-strong correlations between the eighteen variables and component 1 to 5. For the component 1, the relation with perceived quality (PQ) is the strongest one. Thus, the first component seems to measure propensity to evaluate the perceived quality's impact. The second component measures brand trust (BT); the third component measures brand loyalty (BL); brand awareness (BA) is measured by the fourth one and finally, the fifth component measures brand equity (BE).

3.2 Correlation Analysis

According to our results (Table 6) the means and standard deviations are within the expected ranges. Most of the respondents expressed the presence of a relatively higher level of brand trust and perceived quality (mean = 3.40). This was followed by brand loyalty (mean = 3.25) and brand equity (mean = 3.33). The lowest item is brand awareness (mean = 3.14).

After analyzing the Table 6, we may see that the relations between brand awareness, perceived quality, brand trust, brand loyalty and brand equity have positive correlations in the level of $P < 0.001$. For exploratory research, as we said before, a Cronbach α greater than 0.70 is generally considerate reliable (Nunnally, 1978). Cronbach α statistics for the study contracts are 0.860, 0.889, 0.960, 0.896 and 0.895 for each of the five factors respectively. The highest correlation of brand equity as the final indigenous variable is orderly as following: brand trust ($r=0.521$), brand loyalty ($r=0.513$), perceived quality ($r=0.484$) and finally brand awareness ($r=0.382$).

Table 6: Mean, Standard Deviation, Cronbach α and Correlation Analysis

		Mean (μ)	Standard Deviations (δ)	Reliability (Cronbach's α)	1	2	3	4
1	Brand Awareness	3.14	1.27	0.860				
2	Perceived Quality	3.40	1.00	0.889	0.432***			
3	Brand Trust	3.40	1.10	0.960	0.528***	0.442***		
4	Brand Loyalty	3.25	1.26	0.896	0.427***	0.418***	0.421***	
5	Brand Equity	3.33	1.18	0.895	0.382***	0.484***	0.521***	0.513***

p-value is displayed in the parentheses / * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Author's calculation

3.3 Regression Analysis

As we have already evaluated the measurements scales used in the research, in this section we will use the regression analysis to proceed an estimation of the structural model. Table 7 presents the result of the regression analysis.

Table 7: Regression Analysis of Brand Awareness, Perceived quality, Brand Trust, Loyalty and Equity

Variables	β	R^2	t	F	Sig.
Brand awareness to perceived quality	0.386***	0.186	7.00	48.96	0.000
Perceived quality to brand trust	0.580***	0.192	7.13	50.77	0.000
Perceived quality to brand loyalty	0.412***	0.135	5.77	33.34	0.000
Brand trust to brand loyalty	0.356***	0.177	6.77	45.85	0.000
Brand trust to brand equity	0.445***	0.227	7.92	62.77	0.000
Brand loyalty to brand equity	0.325***	0.092	4.65	21.62	0.000

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Author's calculation

According to the T-values presented in **Figure 6**, the significance of all our research hypotheses is approved. Based on the presented output, the largest amount of t-statistic (t) is in the path of brand trust to brand equity equals 7.92 and the lowest amount is in the way of brand loyalty to brand equity is demonstrated as 4.65.

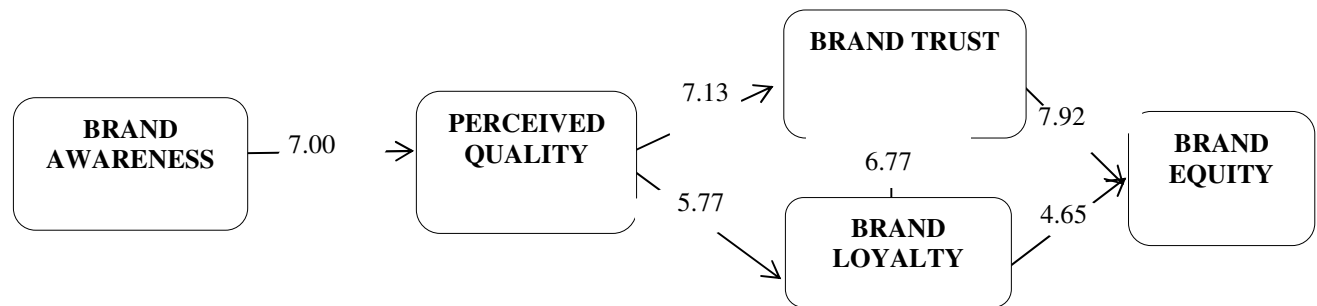


Figure 6: Model of Significance (t-statistic)

As we said before, the study uses simple regression analysis to examine the relationship between brand awareness, perceived quality, brand loyalty, brand trust and brand equity. **Figure 7**, shows the estimation model with the standardized regression weights.

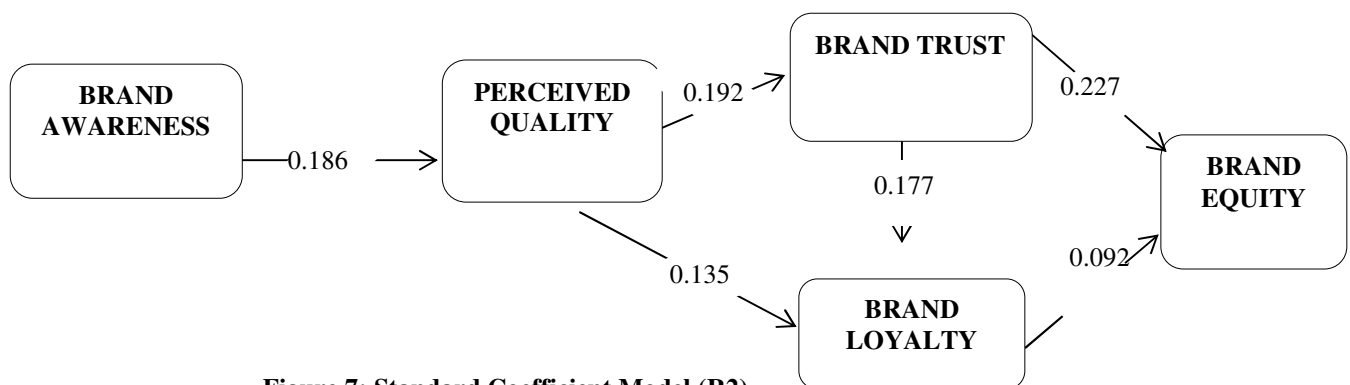


Figure 7: Standard Coefficient Model (R2)

3.3.1 Relationship between Brand Awareness and Perceived Quality.

As shown in Table 7, brand awareness is independent variable and perceived quality is dependent variable. The regression model is statistically significant ($F= 48.96$; $R^2= 0.186$; $P=0.000$). Regression analysis indicated that, brand awareness has a significantly positive effect on perceived quality ($P<0.001$; $\beta=0.386$, $t= 7$). We can notice that $t=7$ and we have explained before that independent variable has an impact on the dependent variable when $t \geq 2$. That means brand awareness can explain up to 18.6% of perceived quality ($R^2=0.186$) and when brand awareness increase of one point (1%) then perceived quality will increase by 0.386 ($\beta=0.386$). Thus, **Hypothesis 1 (H1)**, proposing that brand awareness is positively related to perceived quality is supported by our study.

3.3.2 Relationship between Perceived Quality, Brand Loyalty and Brand Trust.

In this section, let perceived quality as the independent variable and, brand trust and brand loyalty as dependent variables. The regression models of perceived quality with brand trust and brand loyalty were statistically significant, respectively ($F= 50.77$; $R^2= 0.192$; $P=.000$) and ($F= 33.34$; $R^2= 0.135$; $P=0.000$). Brand trust ($\beta=0.580$, $t= 7.13$, $p<0.001$) and brand loyalty ($\beta=0.412$, $t=5.77$, $p<0.001$) are positively and significantly related to perceived quality.

Our regression analysis indicates the independent variable perceived quality is significant at 1% upon dependent variables brand trust and brand loyalty ($P= 0.000$). In fact, perceived quality can explain 19.2% ($R^2= 0.192$) of brand trust and 13.5% of brand loyalty ($R^2= 0.135$) and for each unit increase in the predictor variable perceived quality, brand trust and brand loyalty will increase respectively by 0.580 and 0.412 units. Thus, **Hypothesis 2 (H2) and Hypothesis 3 (H3)**, proposing that perceived quality is positively related to both brand trust and brand loyalty is supported.

3.3.4 Relationship between Brand Trust, Brand Loyalty and Brand Equity.

From the analysis of the determination coefficients (R^2) of the structural equations show in table 7, it was found that brand trust has a positive effect on both brand loyalty ($R^2=0.177$, $t>1.96$) and brand equity ($R^2=0.227$, $t>1.96$). **Figure 7** presents, brand trust has an effect on brand loyalty and on brand equity by respectively 0.177 and 0.227 in a positive manner. It means an increment in brand trust improves brand loyalty and brand equity. So

the more brand trust, the more brand loyalty and brand equity will arise.

Thereby, **Hypothesis 4 (H4) and Hypothesis 5 (H5)** saying that brand trust has a significant and positive effect on brand loyalty and brand equity, are supported. ($F = 45.85$; $R^2 = 0.177$; $P = 0.000$) and ($F = 62.77$; $R^2 = 0.227$; $P = 0.000$) respectively for brand trust with brand loyalty and brand equity.

3.3.5 Relationship between Brand Loyalty and Brand Equity.

Here, let brand loyalty the independent variable and brand equity the dependent variable. The regression model is statistically significant ($F = 21.62$; $R^2 = 0.092$; $P = 0.000$). Regression analysis (Figure 7) indicated that, brand loyalty has significantly positive effect on brand equity ($P < 0.001$; $\beta = 0.325$, $t = 4.65 > 1.96$). That result means brand loyalty can explain 32.5% of brand equity. So an improvement in brand loyalty results in an increase in brand equity. Hence, Hypothesis 6 (H6), proposing that brand loyalty is positively related to brand equity, is supported by our study.

3.4 Mediating Test

In statistics, a mediation model is a procedure that seeks to identify and explicate the process which underlies an observed relationship between an independent variable and a dependent variable via the inclusion of a third hypothetical variable, known as a mediator variable (also a mediating variable).

Baron and Kenny (1986, p.1177) suggest three steps to examine the mediating effects. First, the independent variable (x) must be shown to affect the dependent variable (y) in the first equation. Second, the independent variable (x) must affect the mediator (M) in the second equation; and third, the mediator (M) must affect the dependent variable (y) in the third equation. If these conditions are all fulfilled in the predicted direction, then the effect of the independent variable on the dependent variable must be less in third equation than in the second equation.

3.4.1 Mediating Test Result

3.4.1.1 Testing Mediating of Brand Awareness, Perceived Quality, Brand Trust, and Brand Equity.

To test whether perceived quality, brand trust and brand loyalty, are mediator variables, a regression analysis is applied to examine if brand awareness will mediate brand equity through perceived quality, brand trust and brand loyalty. The first regression tries to test if brand awareness will mediate brand equity through perceived quality and brand trust. Let perceived quality as the dependent variable, and brand awareness as the independent variable. The result reveals that brand awareness ($\beta = 0.343$, $p < 0.001$) is significantly affected to perceived quality. More precisely, brand awareness can explain 14% of perceived quality ($R^2 = 0.140$, $F = 35.92$).

Second, let brand equity as the dependent variable, and brand awareness and perceived quality as the independent variable. The results show that brand awareness ($\beta = 0.256$, $p < 0.001$), and perceived quality ($\beta = 0.181$, $p < 0.001$) are significantly accounted for brand equity.

Third, regresses with brand equity by adding the mediating variable, perceived quality in brand awareness. The results demonstrate that β value of brand equity reduces from 0.256 to 0.182 in brand awareness. As a consequence, the effects between brand awareness and brand equity are reduced because of adding the mediator, perceived quality.

In a 4th step (Model 4), let brand trust as the dependent variable, and brand awareness as the independent variable. The result reveals that brand awareness ($\beta = 0.278$, $p < 0.001$) is significantly affected to brand trust.

We applied a final regression (Model 5) with brand equity by adding two mediating variables: perceived quality and brand trust in brand awareness. The results exhibit that β value of brand equity reduces from 0.182 to 0.150 in brand awareness. As a consequence, the effects between brand awareness and brand equity are more reduced (compared to equation 3) because of adding two more mediator variables: perceived quality and brand trust. So as conclusion, perceived quality and brand trust will mediate between brand awareness and brand equity (Cf. Table 8).

Table 6: Mediating Test of Brand Awareness, Perceived Quality, Brand Trust, and Brand Equity

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
	Perceived Quality	Brand Equity	Brand Equity	Brand Trust	Brand Equity
Brand awareness	0.343*** (0.000)	0.256*** (0.000)	0.182*** (0.003)	0.278*** (0.000)	0.150*** (0.017)
Perceived quality		0.181*** (0.000)		0.580*** (0.000)	0.098** (0.005)
Brand trust					0.445*** (0.000)
Adj. R2	0.140	0.177	0.252	0.166	0.260
F	35.92	24.06	37.17	22.43	26.10

p-value is displayed in the parentheses / *p<0.05, **p<0.01, ***p<0.001 / Source: Author's calculation

3.4.1.2 Testing Mediating of Brand Awareness, Perceived Quality, Brand Loyalty and Brand Equity.

Besides, in order to verify as well, if brand awareness will mediate brand equity through perceived quality and brand loyalty a second regression is effectuate. First step, let brand loyalty as the dependent variable, and brand awareness as the independent variable. The result reveals (Model 6) that brand awareness ($\beta=0.220$, $p<0.001$) is significantly and positively affected to brand loyalty.

Second (Model 7), let brand equity as the dependent variable, and brand awareness and brand loyalty as the independent variable. The results show that brand awareness (through brand loyalty) having a result of $\beta=0.164$, $p<0.001$, and brand loyalty ($\beta=0.325$, $p<0.001$), are significantly accounted for brand equity. However, we can notice that this regresses with brand equity by adding two mediating variables perceived quality and brand loyalty in brand awareness, reduces the value of brand equity in the model 7. In fact, the results demonstrate that β value of brand equity reduces from 0.182 to 0.164 in brand awareness. As a consequence, the effects between brand awareness and brand equity are reduced because of adding two mediator variables perceived quality and brand loyalty. In the same way, if we operate a final regression (Model 8) with brand equity by adding all the assumed mediating variables (perceived quality, brand trust and brand loyalty) in brand awareness. The results demonstrate that β value of brand equity will reduces more from 0.164 to 0.138 in brand awareness.

As a conclusion, we can say the effects between brand awareness and brand equity are more reduced in the last equation (Model 8) because of adding three mediator variables: perceived quality, brand and brand loyalty. So, perceived quality and brand loyalty, mediate between brand awareness and brand equity (Cf. Table 9). Thereby, perceived quality, brand trust and brand loyalty are mediator variables in our research structure.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	Perceived Quality	Brand Equity	Brand Equity	Brand Trust	Brand Equity	Brand Loyalty	Brand Equity	Brand Equity
Brand awareness	0.343*** (0.000)	0.256*** (0.000)	0.182*** (0.003)	0.278*** (0.000)	0.150*** (0.017)	0.220** (0.001)	0.164** (0.009)	0.138* (0.030)
Perceived quality		0.181*** (0.000)			0.098*** (0.075)	0.152** (0.008)		0.089 (0.113)
Brand loyalty			0.325*** (0.000)	0.170*** (0.006)			0.325*** (0.000)	
Adj. R2	0.140	0.177	0.252	0.166	0.260	0.190	0.255	0.260
F	35.92	24.06	37.17	22.43	26.10	17.76	25.42	19.84

p-value is displayed in the parentheses. *p<0.05, **p<0.01, ***p<0.001./ Source: Author's calculation

Table 7: Mediating Test of Brand Awareness, Perceived Quality, Brand Loyalty and Brand Equity

3.5 Summarize of analyzing

Table 10, shows the summary of our structural model result. Brand awareness influences perceived quality by 0.186 ($R^2=0.186$) in a positive way. Perceived quality has a positive impact on brand trust by 0.192 so an increase in perceived quality leads to a brand trust; Moreover, perceived quality also has an impact on brand loyalty by 0.135 positively. So an improvement in brand identification results in an increase in brand trust. Brand

trust effects brand loyalty and brand equity by 0.177 and 0.227. As a result of this, the more brand trust, the more brand loyalty will arise and the more brand equity will arise as well. Brand trust and brand loyalty will have an effect on brand equity by 0.227 and 0.092 orderly. Thereby, improving brand trust and brand loyalty would increase brand equity. This brings the results that H1, H2, H3, H4, H5, and H6 are all supported with perceived quality, brand trust and brand loyalty as mediator variables.

Table 8: Result of the Structural Model

Structural Equations	β	R2	t	F	Results
(H1): Brand awareness to perceived quality	0.386***	0.186	7.00	48.96	Supported
(H2): Perceived quality to brand trust	0.580***	0.192	7.13	50.77	Supported
(H3): Perceived quality to brand loyalty	0.412***	0.135	5.77	33.34	Supported
(H4): Brand trust to brand loyalty	0.356***	0.177	6.77	45.85	Supported
(H5): Brand trust to brand equity	0.445***	0.227	7.92	62.77	Supported
(H6): Brand loyalty to brand equity	0.325***	0.092	4.65	21.62	Supported

*p<0.05, **p<0.01, ***p<0.001

Source: Author's calculation

p-value is displayed in the parentheses

4. Discussion and implications

This research was done using a developed theoretical framework based on previous studies. In conclusion, this paper has proposed what is possible, practical, and can be apply by marketers in terms of brand awareness, perceived quality, brand loyalty, brand trust and brand equity. Based on the results collect from this study, brand awareness leads to improve perceived quality. In other words, when customers see that the brand is known and has a strong public reputation (brand awareness) then they perceived a higher amount of quality in the product (perceived quality). This finding is in line with the results of studies directed by Yi and La, 2002 and Chang et.al, 2001. Perceived quality, in turn, has a positive effect on brand trust and brand loyalty. In fact, when perceived quality is strengthened, customers put reliance and trust on brand, its futures turnovers and promises. It will also promote customers to prolong relationship with the brand and to intensify his loyalty toward the company. This finding is supported by previous studies done by others scholars (Kim et.al, 2001 and Um, 2008; Halliday 2008 and Kim et.al. 2001).

A significant positive effect of brand trust on brand loyalty and on brand equity is also found. As a matter of fact, when clients trust a brand and its promises, then they will create a collection of positive connections in their mind concerning that brand and they will develop a higher loyalty to the brand and its products. A person who trusts in a brand is more willing to remain loyal to it, to pay a premium price for it, to buy new products presented under it in the existing and in new categories, and to share with others some information about his or her tastes, preferences, and behavior (Chaudhuri and Holbrook, 2001). Trust is important in many high-involvement especially premium product markets. That's why trusted brands will be purchased more often and the utmost marketer's goal in brand-relationship development is a customer who is loyal towards the brand. Therefore, both loyalty and trust will have a positive effect on brand equity. This result is compatible with studies lead by Moorman, Zaltman, and Deshpande (1992); Chaudhuri and Holbrook (2001); Morgan and Hunt (1994), Mohammad (2012), Lau and Lee (1991). We also have researcher like Ambler (1997), Chen (2010), Jevons and Gabbott (2000), Kim et.al (2008), Aaker (1991) and Hawley (2009). As the study conducted by Yoo and Donthu (2001), the present study confirmed the positive effect of brand loyalty on brand equity. We also find out that brand awareness has a bigger impact on brand equity when compared with mediator variables.

This research aimed to investigate the effects of brand awareness on brand equity through perceived quality, brand trust and brand loyalty in services industries (especially telecom industry). Marketing managers can use these results as help to justify expenditures on brand and customer related marketing activities. This finding also offers contributions to academicians in several ways. There have been several studies in brand literature that focus widely on the main effects of brand equity dimensions. Summarizing the results, the study goals were reached and the study provides a model to ameliorate brand equity and gives several substantial implications for strategic brand management. Telecom industry was chosen for various reasons. First brand commitment is very high in Communication brands. Second, because high telecom product standing consists of all brand equity dimensions. Third, good perceived quality in company services is very important for telecom customers. Fourth, brand trust and loyalty are very important for both customers and telecom brand manufacturers. Understanding and managing brand loyalty is especially important in services goods industries (MTN Telecom), in which good services involve large profit margins on the hand but involve long placement cycles for buyers on the other hand.

So the bigger challenge for telecom operators is to ensure that consumers will repeat-purchase within the same company even if it is time to buy a new SIM Card.

5. Research limitation

The present research shows strong empirical support for the relationships among brand awareness, perceived quality, brand trust, brand loyalty and brand equity. The primary limitation of this research is the absence of clarity in target market of MTN Telecom. Also, only direct effects of the brand equity dimensions have been studied; indirect effect between brand equity dimensions could have been studied as well. Indeed, this study was carrying on the service industry only. Despite the fact that the choice of these service brands has been planned deliberately, in a future research it can be extended to other brands or to brands of the same sector of activity in order to make comparisons between sectors. Second, the data collected for the survey was limited to Cameroon, though MTN Telecom is present all over most African countries. So, one of the main principal limitation of this study is that a non-representative sample used. Third, the study uses self-reported measures and online measures, this latter, may not be the most appropriate way to assess future behavior. Fourth, it explores only one service categories, limiting the generalization to other domains. In general, these findings should be repeat with different product categories and brands. Finally, the present study did not investigate on personal factors like brand involvement, brand associations, brand experience and brand personality. Overall, we still need to develop a more detailed understanding of the relationship between brand equity and other relationship marketing related variables. Overall, the more detailed understanding of the effects of brand awareness, perceived quality, brand trust, and loyalty on building brand equity.

6. Suggestions of the Study

This research suggests that Telecom operators should pay more attention to the impact of brand awareness, perceived quality, brand trust and brand loyalty on overall brand equity. The study finds that if customers can recognize, identify and choose a specific brand name when they want to purchase or recommend a telecom operator then, that means communication operator hold higher brand awareness. When consumers are not aware of a certain mobile operators when they search for a telecom services, it is very unlikely for them to choose this mobile. Whereby, brand awareness mostly influences the cognitive component, and brand equity cannot be created without brand awareness. Hence, Telecom Company and brand managers are recommended to examine carefully their brand marketing communication strategy in order to help maintain customer recognition and recall of a communication's brand-name compared to its competitors. In fact, when a product has a well-known brand name, it will benefit consumers' preferences and increase their purchase intention. Thus, Telecom manufacturers, mostly MTN Telecom, should build a brand and promote its brand awareness through sales promotion, advertising, and other marketing activities. When brand awareness is high, perceived quality, brand trust and brand loyalty will also be ameliorate. However, telecom operator (especially MTN as our case study) should be aware that consumers will evaluate perceived quality of a product and service from their purchase experience. So, they ought to emphasize a good quality in their production. A high evaluation indicates that consumers are satisfied. As a result, customers will increase their loyalty toward the brand and enhance their further repurchase behavior.

Also, This study covers only about MTN telecom there is no comparison with other telecom operators. Further research can focus on trying to ameliorate research from MTN to other telecom operators.

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